

WHAT IS CLAIMED IS:

1. A flexible conduit comprising

(a) a metal hose provided with a helical groove having a plurality of turns; said metal hose having an end;

5 (b) a plastic jacket surrounding said metal hose and conforming to the helical groove thereof;

(c) a plastic inner hose received in said metal hose and having a projecting length portion extending beyond said end of said metal hose; and

10 (d) a plastic coupling part surrounding said metal hose and including

(1) a cylindrical collar surrounding said projecting length portion and having a material-to-material bond therewith; and

15 (2) an overlapping portion adjoining said cylindrical collar and extending away therefrom; said overlapping portion surrounding said jacket and extending into said helical groove; said overlapping portion and said plastic jacket having a material-to-material bond with one
20 another.

2. The flexible conduit as defined in claim 1, wherein said coupling part is injection molded on said plastic jacket of said metal hose and said projecting portion of
25 said plastic inner hose.

3. The flexible conduit as defined in claim 1, wherein said plastic inner hose is in a bondless contact with said metal hose.

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4. The flexible conduit as defined in claim 1 wherein said overlapping length portion of said plastic inner hose has an axial length between 0.3 and 1 cm.

5 5. The flexible conduit as defined in claim 1, wherein said jacket, said plastic inner hose and said coupling part are of polyurethane.

10 6. The flexible conduit as defined in claim 1, wherein said jacket and the plastic inner hose are of PVC and the coupling part is an injection molded member having a material selected from the group consisting of a polyester elastomer and polyurethane.

15 7. The flexible conduit as defined in claim 1, wherein said jacket, said plastic inner hose and said coupling part are of a polyolefin elastomer.

20 8. The flexible conduit as defined in claim 1, wherein said overlapping portion of said coupling part extends over 2 to 3 turns of said helical groove of said metal hose.

25 9. The flexible conduit as defined in claim 1, wherein said helical groove is an external helical groove provided in an outer circumferential surface of said metal hose; said metal hose further comprising an internal helical groove provided in an inner circumferential surface of said metal hose; said inner circumferential surface of said
30 metal hose and an outer circumferential surface of said plastic inner hose define a space therebetween; further wherein said coupling part includes an inner sleeve portion

situated in said space along a terminal length portion of said metal hose; said inner sleeve portion adjoining said collar and having a material-to-material bond with said outer circumferential surface of said plastic inner hose;
5 said inner sleeve portion extending into said internal helical groove of said metal hose, whereby said inner sleeve portion has a threaded outer configuration being in a form-fitting relationship with said metal hose; said overlapping portion, said collar and said inner sleeve
10 portion of said coupling part forming a one-piece, injection molded member.

10. The flexible conduit as defined in claim 9,
wherein said inner sleeve portion extends over at least one
15 turn of said inner helical groove of said metal hose.

11. The flexible conduit as defined in claim 1,
further comprising an outer sleeve surrounding said coupling part; an inner sleeve surrounded by said plastic
20 inner hose and situated radially inwardly of said coupling part; said inner sleeve having an outer diameter greater than an inner diameter of said plastic inner hose for compressing said coupling part, said plastic inner hose, said metal hose and said jacket between said outer and
25 inner sleeves.

12. The flexible conduit as defined in claim 11,
wherein said inner sleeve has an inner diameter
substantially equal to the inner diameter of said plastic
30 inner hose.